

AMENDMENTS TO THE CLAIMS:

Please amend the claims as shown in the following claim listing. The claim listing replaces all prior claim versions and claim listings in the application:

1. (currently amended) Apparatus for helping to protect an occupant of a vehicle that has a side structure and a roof, said apparatus comprising:

an inflatable vehicle occupant protection device that is inflatable in a direction away from the vehicle roof into a position between the side structure of the vehicle and a vehicle occupant, said inflatable vehicle occupant protection device comprising overlying panels that are interconnected along at least a portion of a perimeter of said inflatable vehicle occupant protection device to define an inflatable volume of said inflatable vehicle occupant protection device, said inflatable vehicle occupant protection device when inflated having a predetermined thickness measured between overlying points on said overlying panels at a location where the head of an occupant may contact said inflatable vehicle occupant protection device; and

an inflation fluid source actuatable to provide a volume of ~~that provides~~ inflation fluid to said inflatable volume sufficient to inflate ~~for inflating~~ said inflatable vehicle occupant protection device, ~~said inflation fluid in said inflatable vehicle occupant protection device being pressurized to a predetermined pressure when said inflatable~~

C1
~~vehicle occupant protection device is inflated, said~~
~~predetermined, said inflation fluid source comprising means~~
~~for inflating said inflatable vehicle occupant protection~~
~~device to a pressure that is a defined mathematical being~~
~~determined as a function of said predetermined thickness of~~
~~said inflatable vehicle occupant protection device when~~
~~inflated, said predetermined pressure being sufficient to~~
~~prevent the head of the occupant travelling at a predetermined~~
~~velocity from striking the side structure through said~~
~~predetermined thickness of said inflatable vehicle occupant~~
~~protection device.~~

2. (currently amended) ~~Apparatus as defined in claim 1,~~
~~wherein said predetermined pressure is a function of said~~
~~predetermined thickness according to the formula:~~

Apparatus for helping to protect an occupant of a vehicle
that has a side structure and a roof, said apparatus
comprising:

an inflatable vehicle occupant protection device
that is inflatable in a direction away from the vehicle roof
into a position between the side structure of the vehicle and
a vehicle occupant, said inflatable vehicle occupant
protection device comprising overlying panels that are
interconnected along at least a portion of a perimeter of said
inflatable vehicle occupant protection device to define an
inflatable volume of said inflatable vehicle occupant
protection device, said inflatable vehicle occupant protection
device when inflated having a thickness measured between

overlying points on said overlying panels at a location where
the head of an occupant may contact said inflatable vehicle
occupant protection device; and

an inflation fluid source that provides inflation
fluid to said inflatable volume for inflating said inflatable
vehicle occupant protection device, said inflation fluid in
said inflatable vehicle occupant protection device being at a
pressure when said inflatable vehicle occupant protection
device is inflated, said pressure having a functional
relationship with said thickness of said inflatable vehicle
occupant protection device according to:

$$P = (4.2 \times 10^7) T^{-2.8};$$

wherein P represents said ~~predetermined~~ pressure
expressed in kilopascals and T represents said ~~predetermined~~
thickness expressed in millimeters.

3. (currently amended) Apparatus as defined in claim 1
~~claim 2~~, wherein said ~~predetermined~~ thickness is 120-150
~~between 100-150 millimeters.~~

Claim 4 (cancelled).

5. (currently amended) Apparatus as defined in claim 2,
wherein said ~~predetermined~~ thickness is ~~between~~ 120-150
millimeters.

Claim 6 (cancelled).

7. Apparatus as defined in claim 2, wherein said inflatable volume is between 20-45 liters.

8. (currently amended) ~~Apparatus as defined in claim 1, wherein said predetermined pressure is a function of said predetermined thickness according to the formula:~~

Apparatus for helping to protect an occupant of a vehicle that has a side structure and a roof, said apparatus comprising:

an inflatable vehicle occupant protection device that is inflatable in a direction away from the vehicle roof into a position between the side structure of the vehicle and a vehicle occupant, said inflatable vehicle occupant protection device comprising overlying panels that are interconnected along at least a portion of a perimeter of said inflatable vehicle occupant protection device to define an inflatable volume of said inflatable vehicle occupant protection device, said inflatable vehicle occupant protection device when inflated having a thickness measured between overlying points on said overlying panels at a location where the head of an occupant may contact said inflatable vehicle occupant protection device; and

an inflation fluid source that provides inflation fluid to said inflatable volume for inflating said inflatable vehicle occupant protection device, said inflation fluid in said inflatable vehicle occupant protection device being at a pressure when said inflatable vehicle occupant protection device is inflated, said pressure having a functional

relationship with said thickness of said inflatable vehicle
occupant protection device according to:

$$P = (3.0 \times 10^5) T^{-1.92};$$

C/ wherein P represents said predetermined pressure expressed in kilopascals and T represents said predetermined thickness expressed in millimeters.

Claims 9 and 10 (cancelled).

11. (currently amended) Apparatus as defined in claim 8, wherein said predetermined thickness is between 120-150 millimeters.

Claim 12 (cancelled).

13. Apparatus as defined in claim 8, wherein said inflatable volume is between 20-45 liters.

14. Apparatus as defined in claim 1, wherein said inflatable vehicle occupant protection device is an inflatable curtain having a stored position extending along the side structure adjacent to the vehicle roof.

15. (currently amended) Apparatus as defined in claim 14, wherein said overlying panels are interconnected to define inflatable areas of said inflatable curtain, said predetermined thickness being measured between said overlying panels within said inflatable areas.

16. Apparatus as defined in claim 14, wherein said inflatable curtain when inflated extends along the side structure of the vehicle between an A pillar and a C pillar of the vehicle.

C 17. Apparatus as defined in claim 14, wherein said inflatable curtain, when inflated, overlies at least a portion of an A pillar, a B pillar and a C pillar of the vehicle.

18. Apparatus as defined in claim 14, further including a fill tube having a portion located in said inflatable curtain, said inflation fluid source being in fluid communication with said fill tube, said inflation fluid source, when actuated, providing inflation fluid to said fill tube, said fill tube directing said inflation fluid into said inflatable curtain to inflate said inflatable curtain.

19. Apparatus as defined in claim 1, further comprising a sensor for sensing a vehicle condition for which deployment of said inflatable vehicle occupant protection device is desired, said sensor actuating said inflation fluid source to provide inflation fluid to inflate said inflatable vehicle occupant protection device.

20. Apparatus as defined in claim 1, wherein said inflation fluid source comprises an inflator which is

actuatable to inflate said inflatable vehicle occupant protection device.

C1
21. (currently amended) Apparatus as recited in claim 2, wherein said pressure is sufficient to prevent an occupant's head having a mass of 6.08 kilograms travelling at a velocity of eighteen miles per hour from striking the side structure through said thickness of said inflatable vehicle occupant protection device ~~predetermined velocity of the occupant's head is eighteen miles per hour.~~

22. (currently amended) Apparatus as recited in claim 8, wherein said pressure is sufficient to prevent an occupant's head having a mass of 6.08 kilograms travelling at a velocity of twelve miles per hour from striking the side structure through said thickness of said inflatable vehicle occupant protection device ~~predetermined velocity of the occupant's head is twelve miles per hour.~~

23. (new) Apparatus as defined in claim 1, wherein said defined mathematical function also includes at least one value based on a velocity at which an occupant's head having a given mass may impact said inflatable vehicle occupant protection device.

C2
24. (new) Apparatus as defined in claim 1, wherein said pressure that is a defined mathematical function is sufficient prevent an occupant's head having a given mass and travelling

Serial No. 09/618,536

C2 at a given velocity from striking the side structure through
said thickness of said inflatable vehicle occupant protection
device.